

**Amendments to the Specification:**

**In the Abstract:**

Time-frequency coding in a multi-band ultra-wideband system is generally described. In this regard a hopping code agent is presented to select a frequency hopping code for encoding and decoding from a set of predetermined FHC's for communicating with other devices in a multi-band ultra-wideband (MB-UWB) network, wherein the FHC defines a sequence of two or more pulses over two or more frequencies and wherein the FHC's include a time slot that contains no transmission. Other embodiments are also disclosed and claimed.